

Attachment 3

ARMY LAND USE AND FACILITY SPACE – ALLOWANCES

A3.1. Applicability:

A3.1.1. This Attachment does not apply to the Air Force. For Air Force Facility Space Allowances, see AFI 32-1024, *Standard Facility Requirements*, and AFH 32-1084, *Facility Requirements Handbook*.

A3.1.2. This Attachment does not apply to the Navy and Marine Corps. For Navy and Marine Corps Facility Space Allowances, see NAVFAC P-80, *Facility Planning Factor Criteria for Navy and Marine Corps Shore Installations*.

NOTE: Metric units apply to new airfield construction, and where practical, modifications to existing airfields and heliports, as discussed in paragraph 1.4.4.

**Table A3.1. Facility Class 1: Operational and Training Facilities,
Category Group 11: Airfields Pavement, General**

Category Code	Item and Allowance
110 AIRFIELD PAVEMENTS	
111 Airfield Pavements - Runways Pavements that are designed and constructed for the safe takeoff and landing operations of rotary- and fixed-wing aircraft.	
11110	Fixed-Wing Runway, Surfaced A flexible or rigid paved airfield surface used for normal takeoffs and landings of fixed-wing aircraft. It can also accommodate rotary-wing aircraft. From an operational point of view, the runway includes the prepared landing surface, shoulders, overruns, plus various cleared areas and airspace. For inventory purposes, only the prepared runway surface is included. One Fixed-wing runway is allowed at an aviation facility. For Class A, basic dimensions are 30 m [100 ft] wide, and length as shown in Table 3.3. For Class B, width and length requirements are shown in Table 3.2.
11111	Fixed-Wing Runway, Unsurfaced An unpaved, prepared surface for training, emergency, and other special takeoff and landing operations of fixed-wing aircraft. It can also accommodate rotary-wing aircraft. From an operational point of view, the runway includes the landing surface, shoulders, overruns, plus various cleared areas and airspace. For inventory purposes, only the prepared runway surface is included.

11120	<p>Rotary-Wing Runway, Surfaced</p> <p>A paved airfield or heliport surface provided for the exclusive use of rotary-wing takeoffs and landings. Marked surfaces used as reference or control points for arriving and departing aircraft (hoverpoints) are part of the runway. From an operational point of view, the runway includes the prepared landing surface, shoulders, overruns plus various cleared areas and airspace. For inventory purposes, only the prepared runway surface is included.</p> <p>Basic dimensions are 23 m [75 ft] wide, 490 m [1,600 ft] long. A runway may be provided when helicopter companies are authorized at heliports at Army airfields when air traffic density or other operational problems prohibit mixing of medium rotary- and fixed-wing aircraft.</p>
11121	<p>Rotary-Wing Runway, Unsurfaced</p> <p>An unpaved, prepared surface used exclusively for training, emergency, and other special takeoff and landing operations of rotary-wing aircraft. From an operational point of view, the runway includes the prepared landing surface, shoulders, overruns, plus various cleared areas and airspace. For inventory purposes, only the prepared runway surface is included.</p>
11130	<p>Rotary-Wing Landing Pads, Surfaced</p> <p>A paved surface for takeoffs and landings of rotary-wing aircraft. It is physically smaller than a rotary-wing runway and is normally located at a site that is remote from an airfield or heliport. From an operational point of view, the helipad includes the prepared landing surface and shoulders, plus various cleared areas and airspace. For inventory purposes, only the prepared surface is included.</p> <p>Helipads designed and constructed for vertical takeoff and landing of helicopters will be authorized for isolated sites, for support of infrequent operation requirements, for sites which cannot physically support limitations of land and/or airspace or economically justify airfield/heliport development, or at airfield/heliports with high air traffic density which require one or more helipads for establishment of safe aircraft traffic control patterns. Where several helipads are required to serve adjacent high density parking areas, they may be connected by airfield pavement for more rapid landing and takeoff operations. Helipads so connected may be referred to as "helicopter landing strips", or "lanes", not to be confused with helicopter runways. Helipad criteria is applicable to these type facilities.</p> <p>One helipad is allowed at Hospitals.</p> <p>Basic dimensions are 30 m by 30 m [100 ft by 100 ft]. Stabilized shoulders will be provided around helipads and along any connecting pavements.</p>

	11131	<p>Rotary-Wing Landing Pads, Unsurfaced</p> <p>An unpaved prepared surface which is, centered within a clear area, and used exclusively for training, emergency, and other special landing and takeoff operations of rotary-wing aircraft. From an operational point of view, the helipad includes the prepared landing surface and shoulders, plus various cleared areas and airspace. For inventory purposes, only the prepared surface is included.</p>
	11140	<p>Hoverpoint</p> <p>One or more lighted hoverpoints may be authorized at an airfield or heliport where air traffic density requires the constant separation of fixed-wing and rotary-wing traffic or the establishment of separate helicopter traffic patterns or when instrument approach procedures are not possible to a terminal (final) landing area.</p> <p>The hoverpoint is normally a nontraffic area used for air traffic control reference. It consists of a paved 9 m [30 ft] diameter identifier marker centered in a 45.72 m by 45.72 m [150 ft by 150 ft] clear area. Standard helipad approach-departure and transitional surfaces will be provided. The number and location of hoverpoints authorized are dependent upon the helicopter traffic pattern requirements at each particular facility.</p>
<p>112 Airfield Pavements-Taxiways</p> <p>An all weather surface designed and constructed for the safe and efficient powered ground movement of aircraft between runway systems and other paved aircraft operational, maintenance, and parking facilities.</p>		
	11212	<p>Fixed-Wing Taxiways, Surfaced</p> <p>Paved surfaces which serves as designated pathways on an airfield and are constructed for taxiing fixed-wing aircraft. From an operational point of view, a taxiway includes the prepared surface, markings, stabilized shoulders, lighting and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>For Class A runways, paved surfaces are 15 m [50 ft] and for Class B runways, paved surfaces are 23 m [75 ft] wide. At Short Field and Training Assault Landing Zones 15 m [50 ft] is the standard width. Lengths and locations will be as shown on the Department of the Army approved Master Plan of the airfield/heliport.</p>
	11213	<p>Fixed-Wing Taxiway, Unsurfaced</p> <p>Unpaved prepared surfaces which serve as designated pathways on an airfield and are constructed for taxiing fixed-wing aircraft. From an operational point of view, a taxiway includes the prepared surface, stabilized shoulders and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
	11221	<p>Fixed-Wing Taxiway, Surfaced</p> <p>Paved surfaces which serve as designated pathways on an airfield or heliport and are constructed for taxiing rotary-wing aircraft. From an operational point of view, a taxiway includes the prepared surface, markings, stabilized shoulders, lighting and lateral clearance zones. For inventory purposes, only the prepared surface is included</p> <p>At helicopter only facilities, a basic width of 15 m [50 ft] is authorized. When dual-use taxiways support Fixed-Wing operations, use appropriate Fixed-Wing taxiway criteria.</p>

11222	<p>Rotary-Wing Taxiway, Unsurfaced</p> <p>Unpaved prepared surfaces which serve as designated pathways on an airfield or heliport and are constructed for taxiing rotary-wing aircraft. From an operational point of view, a taxiway includes the prepared surface, stabilized shoulders, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
	<p>113 Airfield Pavements - Aprons</p> <p>Prepared surfaces, other than runways and taxiways, where aircraft are parked or moved about the airfield area. They are designed to support specific types of aircraft and to meet operational requirements such as maintenance and loading/unloading activities.</p> <p>The permanent peace time operation and maintenance of Army aircraft requires construction of apron areas to assure safe, efficient and economical accomplishment of the mission.</p> <p>For Fixed-Wing; rigid pavement areas with standard aircraft tiedowns spaced 6 m [20 ft] on centers throughout the usable parking apron area are authorized for parking, maintenance, and hangar access apron areas. Parking aprons should be designed to permit 85% of the authorized aircraft to park under their own power [75% operational parking and 10% maintenance operational checks (MOC)]. The remaining 15% are parked in maintenance facility buildings. When an area is inadequate to permit this capability, operational parking capacity may be reduced to not less than 50% of the 85% with the balance of the 85% being provided surfaced manual parking area. Standard aircraft tiedowns conforming to criteria in Appendix K of this Manual should be used. These tiedowns also serve as the static grounding points.</p> <p>For Rotary-Wing; see Chapter 6 for additional information. The number of Army rotary-wing aircraft used to estimate apron area is 85% of the authorized aircraft. This assumes that 75% of the aircraft will be operational and 10% will be parked for MOC's. The remaining 15% of the authorized aircraft can be assumed to be in maintenance facilities. Any substantial difference to exceed this allowance should be authenticated and submitted as a request to the MACOM to exceed this allowance.</p>
11310	<p>Fixed-Wing Parking Apron, Surfaced</p> <p>A paved airfield surface used for fixed-wing aircraft parking. The area includes parking lanes, taxilanes, exits, and entrances. Aircraft move under their own power to the parking spaces, where they may be parked and secured with tiedowns. Parking designed to distribute aircraft, for the purpose of increased survivability (dispersed hardstands), is included in this category code. From an operational point of view, an apron includes the prepared surface, tiedowns, markings, stabilized shoulders, lighting, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>Parking aprons for Army fixed-wing aircraft will normally be based on the C-12 A-C (Huron) with a wingspan of 17 m [55 ft] and length of 18.25 m [60 ft]. However, mission requirements may require different aircraft dimensions. The width of the parking lane should be equal to the aircraft length. The length of a row will be equal to the number of aircraft times the aircraft wingspan plus the distance between parked aircraft wingtips, as shown in Table 6.1 of this Manual. The taxilane clear-width for Interior, through and peripheral taxilanes is shown in Table 6.1 of this Manual. Paved shoulders will be provided. When a taxilane is to be jointly used by Army fixed-wing and other types of aircraft, such as helicopters or Air Force aircraft, then this common taxilane width will be increased an appropriate amount to accommodate the critical use aircraft. At facilities such as flight training centers, where one type of aircraft predominates, the dimensions of the specific type will be used in lieu of the C-12.</p>

11311	<p>Fixed-Wing Parking Apron, Unsurfaced</p> <p>An unpaved, prepared airfield surface used for fixed-wing aircraft parking. The area includes parking lanes, taxilanes, exits, and entrances. Aircraft move under their own power to the parking spaces, where they may be parked and secured with tiedowns. Parking designed to distribute aircraft, for the purpose of increased survivability (dispersed hardstands), is included in this category code. From an operational point of view, an apron includes the prepared surface, tiedowns, stabilized shoulders, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
11320	<p>Rotary-Wing Parking Apron, Surfaced</p> <p>A paved airfield surface used for rotary-wing aircraft parking. The area includes parking lanes, taxilanes, exits, and entrances. Aircraft move under their own power to the parking spaces where they may be parked and secured with tiedowns. Parking designed to distribute aircraft for the purpose of increased survivability (dispersed hardstands) is included in this category code. From an operational point of view, an apron includes the prepared surface, tiedowns, markings, stabilized shoulders, lighting, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>Parking aprons for Army rotary-wing aircraft will be based on the type of rotary-wing aircraft and parking arrangement, as discussed in Chapter 6 of this Manual. Rotary-wing taxilane widths will be as shown in Table 6.2 of this Manual. Paved shoulders will be provided.</p>
11321	<p>Rotary-Wing Parking Apron, Unsurfaced</p> <p>An unpaved, prepared airfield surface used for rotary-wing aircraft parking. The area includes parking lanes, taxilanes, exits, and entrances. Aircraft move under their own power to the parking spaces, where they may be parked and secured with tiedowns. Parking designed to distribute aircraft, for the purpose of increased survivability (dispersed hardstands) is included in this category code. From an operational point of view, an apron includes the prepared surface, tiedowns, stabilized shoulders, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
11330	<p>Aircraft Maintenance Parking Apron, Surfaced</p> <p>A paved apron for parking fixed- or rotary-wing aircraft awaiting maintenance.</p> <p>Mass aircraft parking aprons are authorized for Aviation Intermediate Maintenance (AVIM) maintenance shop units which have a responsibility for maintenance of aircraft from other facilities or aviation units. For planning purposes, an apron area of up to 11,700 m² [14,000 yd²] is normally sufficient to meet this requirement. Aircraft will be manually parked on this apron. Separate maintenance parking aprons are not authorized for aviation units which have their own AVIM maintenance capability.</p>
11331	<p>Aircraft Maintenance Parking Apron, Unsurfaced</p> <p>An unpaved, prepared apron for parking fixed- or rotary-wing aircraft awaiting maintenance.</p>

11340	<p>Hangar Access Apron, Surfaced</p> <p>A paved surface that connects an aircraft parking apron with a hangar. It is generally equipped with tiedowns and grounding devices. From an operational point of view, an apron includes the prepared surface, tiedowns, grounding devices, stabilized shoulders, lighting from the hangar, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>Hangar access aprons will be provided as a supporting item for each authorized hangar and will be sized for the type of hangar and aircraft to be accommodated and to meet the requirements of site development as shown on a Department of the Army approved general site plan. The access apron will be designed as rigid pavement. Access aprons should be as wide as the hangar doors. Hangar access aprons are further discussed in Chapter 6 of this Manual.</p>
11341	<p>Hangar Access Apron, Unsurfaced</p> <p>An unpaved, prepared surface that connects an aircraft parking apron with a hangar. It is generally equipped with tiedowns and grounding devices. From an operational point of view, an apron includes the prepared surface, tiedowns, grounding devices, stabilized shoulders, lighting from the hangar, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
11350	<p>Aircraft Runway Holding Apron, Surfaced</p> <p>A paved surface which provides an aircraft holding area that is accessible from a taxiway. It is located near the intersection of taxiways and at the ends of runways. It is provided for pre-takeoff engine and instrument checks. From an operational point of view, an apron includes the prepared surface, stabilized shoulders, lighting, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>Aircraft (engine run up) holding aprons are authorized for each runway. The area for the holding apron will be sized to accommodate those assigned and transient aircraft which normally use the runway and should not exceed 3135 m² [3,750 yd²] each, without submitting special justification. Holding aprons are usually programmed with, and as a part of, the parallel taxiway system.</p>
11351	<p>Aircraft Runway Holding Apron, Unsurfaced</p> <p>An unpaved, prepared surface which provides an aircraft holding area that is accessible from a taxiway. It is located near the intersection of taxiways and at the ends of runways. It is provided for pre-takeoff engine and instrument checks. From an operational point of view, an apron includes the prepared surface, stabilized shoulders, and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>

11370	<p>Aircraft Washing Apron, Surfaced</p> <p>A rigid pavement area for washing and cleaning aircraft. It normally includes electrical and water service, drainage, and waste water collection equipment. From an operational point of view, an apron includes the prepared surface, stabilized shoulders, lighting and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p> <p>A washing apron is authorized for each aircraft maintenance hangar. Washing aprons will be sized and dimensioned according to the number and type of aircraft to be washed, local environmental conditions (i.e., soil and climate), and scheduling. See paragraph 6.14.2.</p> <p>The wash apron will be provided with 110 volt electrical service, 25 mm [1 in] water service and compressed air. The wash apron will be provided with drainage facilities to include a facility for wash-waste treatment, including at least a 11,400 L [3,000 gal] capacity holding tank. The tank should be sized to the extent required for effluent to be suitable for discharge into a sanitary system. A collection area for P.O.L. waste and spillage should be provided, when required, in conjunction with the wash apron.</p>
11371	<p>Aircraft Washing Apron, Unsurfaced</p> <p>An unpaved, prepared surface for washing and cleaning aircraft. It normally includes electrical and water service, drainage, and waste water collection equipment. From an operational point of view, an apron includes the prepared surface, stabilized shoulders, lighting and lateral clearance zones. For inventory purposes, only the prepared surface is included.</p>
11380	<p>Aircraft Loading Apron, Surfaced</p> <p>A paved surface for loading cargo aircraft; loading personnel for medical evacuation, and transient aircraft operations; or providing an apron area for arming and disarming aircraft weapons, loading and unloading ammunition, special handling or decontamination of chemical, biological, radiological (CBR) warfare items, and for special security operations.</p> <p>An apron area in support of the airfield operations building, not to exceed 5,850 m² [7,000 yd²,] may be authorized for purposes of handling special loading and unloading of personnel, for medical evacuation flights and for transient aircraft operations. (See Category 11382 for aprons requiring safety clearances and/or security facilities).</p>
11382	<p>Aircraft Special Purpose Apron</p> <p>Special purpose aprons may be authorized for providing safe areas for arming and/or disarming aircraft weapons; loading and unloading ammunition; special handling and/or decontamination facilities for CBR warfare items; and for special security areas. Special-purpose aprons required to conduct defueling operations will be provided at Army aviation facilities. Design will be predicated on the largest aircraft and adequate space for fire support equipment and defueling vehicle and apparatus. Grounding points will be provided. The scope of the apron area and the type of supporting facilities for these special-purpose aprons will be individually justified on the basis of the mission requirements. Safety clearances, appropriate to the requirements of the apron, will be observed. Airfield maps and plans will identify the purpose of the apron</p>

		and show the required safety clearance distances. Explosives clearances are discussed in Appendix I of this Manual.
	11383	Aircraft Loading Aprons, Unsurfaced An unpaved, prepared surface for loading cargo aircraft; loading personnel for medical evacuation and transient aircraft operations. An aircraft loading apron provides an area for arming and disarming aircraft weapons, loading and unloading ammunition, special handling or decontamination of chemical, biological radiological (CBR) warfare items, and for special security operations.
116 Airfield Pavement, Miscellaneous		
	11610	Aircraft Compass Calibration Pads A prepared surface for calibration of air navigation equipment. A rigid paved pad in a magnetically quiet zone of the airfield. The pad surface is painted with alignment markings which are used in the precise calibration of air navigation equipment. The facility may include a taxiway which connects the pad to the main taxiway or apron. One compass calibration pad may be provided at Army airfields or heliports where fifteen or more aircraft are permanently assigned, and at Army depots where aircraft maintenance missions are assigned (AR 750-1, <i>Army Material Maintenance Policies and Retail Maintenance Operations</i>). The compass calibration pad is a paved area which should be located in an electronically quiet zone of the airfield. Compass calibration pads are typically circular and are sized to accommodate one of the assigned or mission aircraft. Compass calibration pads are further discussed in Chapter 6 of this manual.

**Table A3.2. Facility Class 1: Operational and Training Facilities,
Category Group 12: Liquid Fueling and Dispensing Facilities**

Category Code	Item and Allowance
120	LIQUID FUELING AND DISPENSING FACILITIES
121	Aircraft Dispensing Facilities used to store and dispense liquid aviation fuels directly into aircraft or fueling trucks. These facilities consist of dispensing equipment, whose capacity is recorded in liter per minute (LM) [gallons per minute (GM)]. Control and fueling support buildings are operational facilities accounted for with category code 14165, Fueling/POL Support Building. The capacity of these facilities is based upon the flow rate of the pump facilities, (i.e., the number of liters per minute [gallons per minute]) which can be loaded into the aircraft and/or fuel truck.
12110	Aircraft Direct Fueling Facility A facility used for dispensing aircraft fuel under pressure from operational storage tanks directly into the fuel tanks of the aircraft.

12120	Aircraft Fuel Truck Loading Facility A facility for transfer of aircraft fuels from storage tanks to refueling vehicles (tank, truck, fuel, and tank pump units).
12410	Aircraft Fuel Storage, AVGAS, Underground Storage tanks used in support of direct fueling and/or fueling of aircraft that use aviation gasoline (AVGAS). See the 411 series for bulk fuel storage and 12412 for operational storage tanks above ground. Fuel storage should be installed underground. However, when the quantity of the product to be stored is of such magnitude as to create unreasonable demands in construction time or cost, aboveground storage should be considered. Aboveground considerations include available space, safety clearances, security requirements and underground construction conditions. Fuel storage allowances are for a 30-day supply and will be reduced to a 15-day supply where deliveries can be made within 7 days of placing an order. Where deliveries are to be made by tank car, the minimum fuel storage capacity for each type fuel will be 45,400 L [12,000 gal]. Fuel storage capacity of 18,900 L [5,000 gal] will be allowed for each kind of Army aircraft fuel, not provided for permanently assigned aircraft, to provide storage for fuel withdrawn from or required to refuel aircraft maintained but not assigned at the airfield. Requests for greater capacities or for fuel storage and dispensing facilities for types of aircraft fuel for other than Army aircraft at an Army airfield will be individually justified. Storage capacities will be calculated by the formula $a \times b \times c + 12 = 30\text{-day requirement per aircraft and fuel type}$. <div style="margin-left: 40px;"> a = the number of each type of Army aircraft assigned or planned to be assigned. b = the basic annual flying hour planning factor per type of aircraft, as listed in current FM 101-20, <i>US Army Aviation Planning Manual</i>, as a peacetime or noncombat environment. c = the fuel consumption rate per type of Army aircraft, as listed in FM 101-20. Use a factor of 0.78 kg per liter [6.5 lb per gallon]. </div> Total storage capacities will be rounded to the nearest 18,900 L [5,000 gal] for quantities over 18,900 L [5,000 gal.] and to the nearest 3,780 L [1,000 gal.] for quantities under 18,900 L [5,000 gal.].
12411	Aircraft Fuel Storage, Jet, Underground Storage tanks used in support of direct fueling and/or fueling of aircraft that use jet fuel (JP-4/5/8). See the 411 series for bulk fuel storage and 12413 for operational storage tanks above ground.
12412	Aircraft Fuel Storage, AVGAS, Aboveground Storage tanks used in support of direct fueling and/or fueling of aircraft that use aviation gasoline (AVGAS). See the 411 series for bulk fuel storage and 12410 for operational storage tanks underground.

	12413	Aircraft Fuel Storage, Jet, Aboveground Storage tanks used in support of direct fueling and/or fueling of aircraft that use jet fuel (JP-4/5/8). See the 411 series for bulk fuel storage and 12411 for operational storage tanks underground.
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**Table A3.3. Facility Class 1: Operational and Training Facilities,
Category Group 13: Air Navigation and Traffic Aids Building**

Category Code	Item and Allowance								
133	Air Navigation and Traffic Aids Building Facilities housing equipment and functions for air traffic control including flight control and navigational aids.								
	<p>13310 Flight Control Tower</p> <p>Terminal facilities which, by the use of communications systems, visual signaling, and other equipment, provide air traffic control service to aircraft at airfields or heliports.</p> <p>One control tower will be provided for each airfield or heliport in accordance with AR 95-2, <i>Air Traffic Control, Air Space, Airfield Flight Facilities and Navigational Aids</i>.</p> <p>Standards for control towers can be obtained from ATZQ-ATC-FG. The tower cab height will permit a clear view of the entire runway and taxiway system and may be combined with the airfield operations building and/or the fire and rescue station. The tower area will be approximately 260 gross m² [2,800 gross ft²].</p> <p>At facilities provided direct weather support by an Air Weather Service (AWS) detachment, a separate floor of the control tower may be modified or added to house a Representative Weather Observation Station (RWOS). The tower area for the RWOS will be 37 gross m² [400 gross ft²]. An observation platform or catwalk may be provided around the exterior of the RWOS floor.</p>								
	<p>13320 Navigation Building, Air</p> <p>A facility which houses designated types of equipment systems for the exchange of information between airfields and aircraft. Also included are air traffic control facilities which provide approach control services to aircraft arriving, departing, and transitioning the airspace controlled by the airfield or heliport. Unmanned structures containing regulators, relays, emergency generators, service feeder switches, and secondary control panels for lighting at airfields or heliports are also included.</p> <table data-bbox="365 1612 1417 1772"> <tr> <td>Type 0 (Equipment room only)</td><td>14.4 gross m² [156 gross ft²]</td></tr> <tr> <td>Type 1 (Equipment room plus one generator)</td><td>32.1 gross m² [344 gross ft²]</td></tr> <tr> <td>Type 2 (Equipment room plus two generators)</td><td>42.3 gross m² [452 gross ft²]</td></tr> <tr> <td>Type 3 (Equipment room plus three generators)</td><td>52.0 gross m² [560 gross ft²]</td></tr> </table> <p>(Above types formerly contained in AFM 88-2.)</p>	Type 0 (Equipment room only)	14.4 gross m ² [156 gross ft ²]	Type 1 (Equipment room plus one generator)	32.1 gross m ² [344 gross ft ²]	Type 2 (Equipment room plus two generators)	42.3 gross m ² [452 gross ft ²]	Type 3 (Equipment room plus three generators)	52.0 gross m ² [560 gross ft ²]
Type 0 (Equipment room only)	14.4 gross m ² [156 gross ft ²]								
Type 1 (Equipment room plus one generator)	32.1 gross m ² [344 gross ft ²]								
Type 2 (Equipment room plus two generators)	42.3 gross m ² [452 gross ft ²]								
Type 3 (Equipment room plus three generators)	52.0 gross m ² [560 gross ft ²]								

134 Navigational and Traffic Aids, Other Than Buildings

Radar approach control, visual navigational aids, antenna systems, vaults, foundations, tower beacons, and other structures which support Army airfield or Army heliport operations.

13410 Radio Beacon

Radio beacons are of three types: non-directional, air navigation marker, and terminal VHF omni-range (TVOR). The non-directional beacon (NDB) transmits a signal from which the pilot of a suitably equipped aircraft can determine the aircraft's bearing to or from the facility. The NDB operates in the frequency range of 200 to 535.5 kilohertz (kHz) with a variable radio frequency output power between 25 and 50 watts.

An air navigation marker is part of an instrument landing system (ILS) and provides accurate radio fixes along the approach zone. Category II ILS require inner and outer markers.

TVOR beacon transmits very high frequency (VHF) signals 360 degrees in azimuth, oriented from magnetic north. These signals provide aircraft with course and bearing information. The TVOR periodically identifies itself and may use voice recordings on an automatic terminal information service (ATIS) recorder. These facilities are normally small, unmanned structures. The facility excludes electronic equipment and antenna systems that form an integral, equipment-in-place (EIP) component of this navigational aid.

As provided in the applicable TDA for each airfield/heliport in accordance with the provisions of AR 310-49, *The Army Authorization Documents Systems*.

13430 Ground Control Approach System

A radar approach system operated by air traffic control personnel in support of instrument flight rules (IFR) activities. The approach may be conducted with airport surveillance radar (ASR) only, or with both ASR and precision approach radar (PAR). The facility normally consists of small unmanned structures that house electronic equipment and other equipment installed in the control tower. The real property facility excludes electronic equipment and antenna systems that form an integral, equipment-in-place (EIP) component of this navigational aid.

Instrument approach facilities normally authorized for precision-instrumented airfields will consist of a Ground Control Approach (GCA) System. (Requisitioning of equipment will be through the Army Communication Command (USACC) in accordance with AR 95-9, *Terminal Air Navigation and Air Traffic Control Facilities*.)

13440 Instrument Landing System

The Instrument Landing System (ILS) consists of three main elements: a directional localizer, a glide slope indicator, and radio marker beacons. These three precision electronic elements provide aircraft with course alignment, descent and range information, respectively, during instrument flight rules (IFR) approaches to the runway under adverse weather conditions or poor visibility. The ILS normally consists of small, unmanned facilities that house electronic equipment. The real

	<p>property facility excludes electronic equipment and antenna systems that form an integral, equipment-in-place (EIP) component of this navigation aid.</p> <p>An Instrument Landing System (ILS) may be authorized at Army airfields where air navigational aids for use under Instrument Flight Rules (IFR) are required for operation or aircraft of other services, for commercial aircraft in support of Army missions or under air traffic conditions where a GCA facility, item 13430, would be inadequate. Special justification should be submitted to the Office of the Chief of Engineers for Department of the Army approval. Construction for foundations and equipment pads will be accomplished by the using service.</p>
13450	<p>Navigational Lighting</p> <p>Navigational lighting consists of three types: rotating light beacon, flashing light beacon, and air navigation obstruction lighting. The rotating light beacon is the internationally recognized white and green flashing light signal that indicates an airfield. The facility normally consists of a high candlepower unmanned piece of equipment.</p> <p>Air navigation obstruction lighting is one or more electrically operated red, or high-intensity white lights that identify hazards to aircraft operation. Flashing and steady-burning red obstruction lights may be used during darkness or periods of reduced daytime visibility. Flashing high-intensity white lights may be used for both daytime and nighttime conditions. The facility normally consists of an unmanned piece of equipment.</p>
13470	<p>Wind Direction Indicator</p> <p>A facility which provides a visual indication of surface wind direction at Army airfields, heliports and helipads. These facilities include wind socks, wind cones, and wind tees. Lights are used to illuminate the pointing device. The facility normally consists of an unmanned piece of equipment.</p>
136	<p>Airfield and Heliport Pavement Lighting Systems</p> <p>Lighting systems along both sides and the approaches of airport and heliport pavements. It excludes airfield perimeter lighting, security lighting, street lighting, and other general illumination (see the 812-series).</p> <p>Airfield and heliport lighting systems will include only the lighting facilities required for support of aircraft operational areas. Controls and equipment vault facilities will be included as necessary to provide a complete and usable system. Design and equipment will conform to criteria contained in TM 5-811-5, <i>Army Aviation Lighting</i>, AFMAN 32-1076, <i>Visual Air Navigation Facilities</i>, and NAVAIR 51-50-AAA-2, <i>General Requirements for Shore Based Airfield Marking and Lighting</i>. For programming purposes, runway, taxiway, hoverlane, and approach lighting requirements will be designated in linear meters [feet] (based on runway centerline length measurements). Helipad lighting will be designated in linear meters [feet] of a perimeter measurement.</p>
13610	<p>Runway Lighting</p> <p>Lighting consisting of two configurations of lights, one that defines the lateral (side) limits of the runway, and the other that defines the longitudinal threshold (end) limits of the runway. The lateral lights are called runway edge lighting and emit white light. The longitudinal lights are called inboard and winged-out threshold lighting. Each</p>

	<p>threshold fixture emits both red and green light. A medium-intensity system is approximately 45 watts, while a high-intensity system is approximately 200 watts. Floodlights to illuminate hoverpoints are included also.</p> <p>A runway lighting system consisting of runway edge lighting and threshold lighting will be authorized at airfields and/or heliports with surfaced runways.</p> <p>a. Medium intensity lighting with brightness control will be provided on noninstrument runways where justified for flight operations conducted under Visual Flight Rules (VFR).</p> <p>b. High intensity lighting with brightness control will be authorized on runways used for flight operations under Instrument Flight Rules (IFR).</p>
13612	<p>Approach Lighting System</p> <p>A configuration of 7 to 15 light bars located along the extended centerline of the runway. These bars are typically elevated and have multiple fixtures that emit white light to assist aircraft in approaching the end of the runway.</p> <p>A Short Approach Lighting System (SALS) will normally be installed at the approach end of an instrument runway served by a Precision Approach Radar (PAR) or Instrument Landing System (ILS). A more extensive system may be approved based on ceiling and visibility minimums derived under TM 95-226, <i>United States Standard for Terminal Instrument Procedures (TERPS)</i>, for large transport aircraft where justification exists. A Medium Intensity Approach Lighting System (MALs) may be used where a precision approach is not available or justified.</p>
13613	<p>Precision Approach Path Indicator (PAPI)</p> <p>A light system made up of red and white lights mounted on bars located near the landing end of the runway. The purpose of the PAPI is to visually assist pilots on their descent to the runway.</p> <p>A Precision Approach Path Indicator (PAPI) may be provided when justified by special requirements. The PAPI is designed to provide, by visual reference, the same information that the glide slope unit of an instrument landing system provides electronically. PAPIs provide a visual flight path within the approach zone, at a fixed plane inclined at 2.5 to 4 degrees from the horizontal, which an approaching fixed-wing aircraft pilot can visually utilize the PAPI for descent guidance during an approach to landing, under either daytime or nighttime conditions on instrument or visual runways.</p>
13615	<p>Rotary-Wing Parking Pad Lighting</p> <p>A perimeter system of yellow lights around the edge of the rotary-wing landing/parking pad. It may also include other systems, such as a landing direction system which is a series of yellow lights placed along the extended landing pad centerline, and an approach system which is a series of white lights that extend out from the landing direction lights. Inset lights are a series of blue lights placed within the landing surface to aid depth perception. Landing pad flood lights are general illumination lights which are placed parallel to the normal approach.</p> <p>Lighting will be provided for helipads to be used at night and during periods of poor visibility.</p>

13620	<p>Taxiway Lighting</p> <p>A configuration of lighting fixtures which defines the lateral limits of aircraft movement along a taxiway. The configuration normally consists of a line of blue lights paralleling each side of the taxiway, plus yellow entrance and exit lights. Taxiing routes between rotary-wing landing pads and apron areas (hoverlanes) have lights consisting of a single row of semi-flush blue lights illuminating the centerline. The ends of the centerlines may also be marked with red limit lights.</p> <p>Lighting is authorized for all taxiways and taxiways used as hoverlanes required to be used at night or during periods of poor visibility except access taxiways to compass calibration pads and weapon systems calibration pads. The exterior limits of all apron taxilanes will be lighted appropriately. The light intensity will be such as to provide adequate taxiing guidance for all meteorological conditions under which the system is to be used. Brightness control and entrance-exit signs may be provided when specifically authorized by Department of the Army.</p>
13621	<p>Holding Apron Lighting</p> <p>A configuration of blue lights that illuminate the outer edges of a holding apron. Where programmed separately, the scope of holding apron lighting will be the actual length of the outer edges of each holding apron, including pavement fillets. See Item 13620 for taxiway lighting.</p>
13640	<p>Aircraft Lighting Equipment Vault</p> <p>A single vault, not to exceed 44.5 gross m² [480 gross ft²] will be provided for fixed-wing runway or separate heliport lighting equipment. A combination vault, not to exceed 70 gross m² [750 gross ft²], will be provided where both fixed-wing runway and heliport lighting is provided. The area may be increased when a standby generator for the airfield lighting system is authorized.</p>
13670	<p>Parking Apron/Hardstand Lighting</p> <p>Area or security lighting provided by permanently mounted floodlights, with power outlets. Normally the lights are located near the aircraft maintenance and parking areas adjacent to hangars, operations buildings, or other structures along the hangar line for the purpose of conducting maintenance, service, and loading/unloading operations.</p> <p>Aircraft maintenance and parking aprons adjacent to hangars, operations buildings, or other structures located along the hangar line may be floodlighted for purposes of conducting maintenance, service and loading and unloading operations. When these areas are lighted, the floodlight fixtures will be mounted on the structures and/or on poles. If floodlights are pole-mounted, the poles must be located outside of the apron clearance areas. Normally this lighting is programmed as a part of a hangar construction project included as a supporting item and stated in units of light fixtures.</p>

**Table A3.4. Facility Class 1: Operational and Training Facilities,
Category Group 14: Land Operational Facilities**

Category Code	Item and Allowance
140	LAND OPERATIONAL FACILITIES
141	OPERATIONAL BUILDING Facilities which have operations and operational types of activities and equipment including alert hangars and LTA hangars. It excludes ship-related operations buildings (see the 143-series).
14110	Airfield Operations Building A building that houses the flight operations and administrative function of the airfield headquarters. a. The airfield operations building is required to house flight operational and administrative functions of the airfield headquarters. The operations center includes all the functions of flight planning, flight personnel equipment and support rooms, passenger support facilities, and the operations and weather detachments. The airfield headquarters includes administrative space for the commander, military personnel, S-2, S-3, and S-4, safety officer, maintenance officer, and flight surgeon. Also included, unless otherwise provided in other permanent facilities, are an in-flight kitchen and/or snack bar, and a conference and/or briefing room which may also serve as a personnel training or classroom. Because of differences in the aviation missions and the requirements of the facility commanders, the components for an airfield operations building may vary considerably even at Army airfields of comparable size and/or activity. The existence of available permanent facilities will also affect overall space requirements. b. The airfield operations center and/or headquarters may be provided in a separate building or may be combined with the flight control tower and/or fire and rescue station; or, in some cases, may be located in the administrative space or a hangar. c. Actual space requirements will be determined by local appraisal. Projects will be supported by adequate backup data and description to permit MCA Program review by DA and DoD. The number of personnel assigned office space and personnel authorizations will be documented. For project programming guide, the net floor area per building occupant will conform to authorizations contained in TM 5-800-1. Special purpose rooms such as conference, communications, transient waiting, plotting and briefing rooms are not included in the 12 net m ² [130 net ft ²] per building occupant and will be separately justified by operational requirement data. Personnel requiring locker space, but not assigned office space, will not be included as building occupants in computing net floor area. Special facility requirements, such as Air Weather Service (AWS) and the Flight Surgeon, when provided as direct support at the airfield will be included at the scope authorized below without regard to the number of personnel assigned to the special unit. (1) Air Weather Service: At the facilities provided with direct support AWS Detachments, not less than 139 net m ² [1,500 net ft ²] will be authorized. (2) Flight Surgeon Facilities: Normally where 30 or more Army aviators are

assigned to a facility, a flight surgeon will be authorized to care for personnel on flight status and their dependents. Requirements for flight surgeon facilities at variance with those listed below will be justified on an individual basis.

(a) At an airfield supporting not more than 25 assigned aircraft, a space of 57.5 net m² [620 net ft²] is authorized. This area will provide: an office, one examining room, an eye lane, an audiometric booth, a toilet, and records and waiting rooms.

(b) At an airfield supporting 25 to 50 assigned aircraft, the spaces authorized above, plus an additional examining room, for a total of 74.5 net m² [800 net ft²] is authorized.

(c) At an airfield where more than 50 aircraft but less than 200 are assigned, Flight Surgeon and Medical Airmen will be authorized 108 net m² [1,160 net ft²] feet. In addition to the office, two examining rooms, eye lane, toilets, records and waiting room areas, the following will be provided: a minor surgery laboratory room, pharmacy room, separate audiometric booth, ENT (ear, nose, and throat) room, and storage space for supplies and equipment.

(d) At facilities supporting more than 200 aircraft, a separate Flight Surgeon Dispensary facility may be authorized. If an existing structure is not suitable for this purpose, then new construction may be authorized. Scope and design of either modifications to existing facilities or design and construction of a new facility will be coordinated with the Surgeon General's Office through HQDA (DAEN-ECE-M).

d. For guidance purposes only, the approximate range of gross area required for airfield operations and headquarters facilities (not including the AWS and Flight Surgeon space) is:

(1) With not more than 25 assigned miscellaneous aircraft, 204.5 gross m² [2,200 gross ft²].

(2) With not more than 50 assigned miscellaneous aircraft, 279 gross m² [3,000 gross ft²].

(3) At an airfield supporting a division and up to 25 additional miscellaneous aircraft, 492 gross m² [5,300 gross ft²].

(4) At an airfield manned by approximately 60 personnel and which provides interim facilities for Air Force air operations during airlifts, serves other Air Force and Army aviation missions and houses a Medical Evacuation Team, 1,022 m² [11,000 ft²] to 1,858 gross m² [20,000 gross ft²].

14112 Aviation Unit Operations Building

A building, or space within a building, used by aviation units for administration and training functions. It is similar to headquarters or administration and supply buildings; however, normally it is located at an airfield.

Aviation units, with the exception of direct support maintenance units, require support facilities for training and administration in addition to maintenance shops. Such space will be provided in the hangar, or in a separate building near the hangar. Normally, a separate unit operations building is not provided for miscellaneous aircrafts. These administration space requirements should be provided in the hangar.

	14115	<p>Weather Station</p> <p>A building which houses the Representative Weather Observation Station (RWOS), Air Force Weather Service (AWS) operations at Army facilities, and nautical weather services. RWOS is responsible for observing and disseminating current weather conditions to users at an airfield or heliport. AWS service includes observation, recording, reporting, forecasting, and advice to the Army on meteorological conditions. Weather services are also provided for nautical and sea traffic activities from these facilities. Weather stations are also frequently found at RDT&E ranges and other related activities.</p> <p>a. A Representative Weather Observation Station (RWOS) is necessary where an Air Weather Service Detachment is assigned for making continued weather observations critical to the landing and takeoff operations of aircraft. The station should provide an unrestricted view of the runway and surrounding horizons.</p> <p>b. The location and accommodations for the RWOS vary at each airfield depending upon the results of a survey conducted by the Air Force Air Weather Service (AWS). The approved site may be a jointly used control tower, rooms in the tower, a separate building or rooms constructed on an existing building that provides sufficient space for the functions and equipment. For control tower allowance, see category code 13310. As a separate building or as additional rooms, approximately 18.5 m² [200 ft²] is required. This space allowance is in addition to the 139 m² [1,500 ft²] authorized the AWS in the airfield operations building for long range weather forecasting.</p>
<p>149 Operational Facilities Other Than Building</p> <p>Facilities other than buildings, such as towers or other structures, used in support of daily activities on the facility, or for practicing tactical operations.</p>		
	14920	<p>Aircraft Arresting System</p> <p>An aircraft-arresting system is installed equipment that consists of two main parts: an engaging device and an energy absorber. Examples of engaging devices are barrier nets, disc-supported cables, and remotely raised cables. Absorbing devices include anchor chains, rotary-friction brakes, and rotary-hydraulic units, and can be located aboveground or underground.</p>
	14935	<p>Blast/Exhaust Deflector</p> <p>A structure that directs exhaust from engines upward or inward to prevent the erosion of paved and unpaved surfaces, and exhaust interference with taxiways, parking areas, maintenance areas, and nearby buildings. It is also used to channel the effects of blast away from critical areas and to protect nearby facilities.</p>
	14940	<p>Tower</p> <p>A reinforced frame (metal, wood, or concrete) facility that supports or contains various types of equipment. Typical uses are for antenna, radar, and drying parachutes.</p>

**Table A3.5. Facility Class 1: Operational and Training Facilities,
Category Group 17: Training Facilities**

Category Code		Item and Allowance		
	17110	Aircraft Instrument Trainer Building Aircraft instrument trainer building. See Cat. Code 17112, Flight Simulator Building.		
	17112	Flight Simulator Building May be authorized in accordance with the DA-approved basis of issue plan and should conform to the following standard type facilities and scopes:		
		<u>Designation</u>	<u>Gross Area (m²)</u>	<u>Gross Area (ft²)</u>
		UH-1 FS (2B24)*	669	[7,200]
		CH-47 FS (2B31)*	1,607	[17,300]
		AH-1 FS (2B33)*	2,127	[22,900]
		UH-60 FS (2B38)*	2,081	[22,400]
		AH-64 FWS (2B40)	2,072	[22,300]
		UH-1/UH-60 (2B24/38)	1,951	[21,000]
		CH-47/AH-1 (2B31/33)	2,648	[28,500]
		CH-47/UH-60 (2B31/38)	2,806	[30,200]
		AH-1/UH-60 (2B33/38)	3,512	[37,800]
		CH-47/AH-1/UH-60 (2B31/33/38)	4,543	[48,900]
		FS = FLT SIMS FWS = FLT and WPN SIM *(Definitive drawings for these facilities may be obtained through HQDA (DAEN-ECE-A).		
	17983	Army Airfield Training Area A cleared area used to train soldiers in the fundamentals of selecting and securing a site suitable for takeoffs and landings and parking of rotary-wing aircraft.		

**Table A3.6. Facility Class 2: Maintenance Facilities,
Category Group 21: Maintenance**

Category Code		Item and Allowance		
	210	MAINTENANCE		
	211	Maintenance, Aircraft Facilities and shops for maintenance and repair of rotary- and fixed-wing aircraft. Work may be done on air frames, engines, and other aircraft equipment and components.		
	21110	Aircraft Maintenance Hangar A facility which provides space for the maintenance and repair of Army aircraft at all levels except depot. Hangars and/or separate adjacent structures are required to conduct the various levels of aircraft maintenance. These are unit (AVUM), intermediate (AVIM) and general support as defined in AR 750-1, <i>Army Material Maintenance Policies and Retail Maintenance Operations</i> .		

	<p>Hangars will be heated, insulated, adequately lighted for all positions, protected by a fire protection system; and included in them will have compressed air and static grounding systems in the hangar floor areas. Space allowances for hangar facilities are based on the number and type of authorized aircraft, and the maintenance capability of the unit.</p> <p>a. Hangar floor space (also called aircraft maintenance space and aircraft space) is computed by multiplying the number of authorized aircraft times the module area as discussed in Chapter 8; and adding any area required for access/fire lane, and a 1.5 m [5.0 ft] wide perimeter safety corridor. Shop space, which is the hangar space other than hangar floor space, is added to obtain the total hangar space.</p> <p>b. Hangar structures may include space for the following general functional areas when required by the TO&E equipment and the aviation unit mission: aircraft maintenance space and shop space such as technical shops, aircraft parts storage, aircraft weapons repair and storage, unit TO&E storage, flammable storage, maintenance administration, unit administration, unit operations, training and/or briefing facilities. Personal comfort facilities including toilets, showers, locker facilities, and break rooms should be provided.</p> <p>c. Where airfield or heliport activities are limited (low volume of aircraft or aircraft operations) the airfield operations and command functions, normally located in a separate airfield operations building, may be included in a hangar.</p> <p>d. Except when individually justified, or when developing designs for Army National Guard aviation units, authorized areas will not exceed gross square meters (feet) given in Chapter 8.</p>
21113	<p>Aircraft Parts Storage</p> <p>A facility which provides for the storage and issuances of aircraft parts and serves as a supply facility which procures, receives, stocks, and distributes controlled or expendable aircraft components. This category code should be used for stand-alone facilities where the parts storage is physically separate from the remainder of the maintenance activity or to delineate functional areas within the maintenance hangar. Aircraft parts storage at production facilities is classified using category code 44210, Aircraft Parts Storage, Production.</p>
21114	<p>Aircraft Maintenance Bay</p> <p>Area in a hangar where aircraft are parked while being repaired. This category code will be used for stand-alone facilities where the aircraft maintenance bays are physically separate from the remainder of the maintenance activity or to delineate functional areas within the maintenance hangar.</p>
21116	<p>Hangar Shop Space</p> <p>An area in a hangar for activities such as component repair, weapons repair, administration, and flammable storage. This category code will be used for stand-alone facilities where the shop facility is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.</p>
21117	<p>Avionics Maintenance Shop, Installation</p> <p>A facility for repair, storage and testing of electronic gear used in aircraft and in aviation maintenance facilities. This category code will be used for stand-alone facilities, at all levels except depot, where the shop is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.</p>

	Depot level avionics shops are classified using category code 21740, Avionics Maintenance Shop, Depot.
21120	Aircraft Component Maintenance Shop A facility which provides space for engine rebuild, engine and transmission repair, and weights and balances on rotor heads of rotary-wing aircraft. It is normally part of the hangar shop space in category code 21110 Aircraft Maintenance Hangar. This category code will be used for stand alone facilities, at all levels except depot, where the shop is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.
21130	Aircraft Paint Shop A facility which provides space for the washing, rinsing, paint stripping, corrosion removal, chemical agent resistant coating (CARC), and painting of aircraft at maintenance facilities. This category code will be used for stand-alone facilities where the shop is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.
21140	Aircraft Engine Test Facility Following engine removal from the aircraft, this enclosed facility provides space to start and operate the aircraft engine while it is mounted on support equipment. This aids in the diagnosis and testing operations performed during extensive engine maintenance or rebuild. This category code will be used for stand alone facilities where the facility is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.
21141	Aircraft Engine Test Structure Following engine removal from the aircraft, this open-sided facility provides space to start and operate the aircraft engine while it is mounted on support equipment. This aids in the diagnosis and testing operations performed during extensive engine maintenance. This category code will be used for stand-alone facilities where the facility is physically separate from the remainder of the maintenance activity, or to delineate functional areas within the maintenance hangar.
21740	Avionics Maintenance Shop, Depot A facility for the repair of electronic gear used in aircraft and in aviation facilities. This category code should be used only at depot level. At other levels of aircraft maintenance, use 21110 or 21117. A minimum of 56 gross m ² [600 gross ft ²] will be provided in a hangar or in a separate building adjoining an aircraft maintenance apron for an avionics maintenance shop. The facility will be provided with humidity control and suitably equipped to support the repair and storage of electronic gear of aircraft and aviation facilities. Test areas may be shielded to reduce radio frequency interference. The gross area of avionics maintenance shop space should be based on the following allowances: <ul style="list-style-type: none"> 1-30 Aircraft - 56 m² [600 ft²] (generally located in a hangar shop) 31-50 Aircraft - up to 111 m² [1,200 ft²] based on 2.75 m² [30 ft²] for each additional aircraft above 30 51-100 Aircraft - up to 228 m² [2,450 ft²] based on 2.34 m² [25 ft²] for each additional aircraft above 50

	<p>101-150 Aircraft - up to 321 m² [3,450 ft²] based on 1.86 m² [20 ft²] for each additional aircraft above 100</p> <p>151-450 Aircraft - up to 432 m² [4,650 ft²] based on 0.37 m² [4 ft²] for each additional aircraft above 150</p> <p>For over 450 assigned aircraft, specific requirements will be justified.</p> <p>Aggregate space provided for electronics repair in the flight control tower, aircraft maintenance hangars, and for radio parts storage in aircraft unit parts storage buildings, as well as other available post facilities will be taken into account in programming separate new avionics maintenance facilities at an airfield or heliport, to eliminate duplication of existing facilities. However, consideration will be given to economy and efficiency where these functions are performed in one central facility.</p>
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**Table A3.7. Facility Class 4: Supply Facilities,
Category Group 41: Liquid Fuel Storage, Bulk**

Category Code	Item and Allowance
400	SUPPLY FACILITIES
410	LIQUIDS STORAGE, FUEL AND NONPROPELLANTS
411	Liquid Fuel Storage, Bulk Tanks for bulk storage of liquid fuels.
41120	Aviation Gas AVGAS Storage, Aboveground Tanks for bulk storage of non-jet aircraft fuels. These tanks are aboveground type, used for storage of fuel before transfer to an end-use dispensing station. For underground storage, use category code 41122. See category code 124-series for operational fuel storage.
41121	Jet Fuel Storage, Aboveground Tanks for the bulk storage of jet aircraft fuels. These tanks are aboveground type used for storage of fuel prior to its transfer to end-use dispensing stations. For underground storage use category code 41123. See category code 124-series for operational fuel storage.
41122	Aviation Gas Storage, Underground Tanks for the bulk storage of non-jet aircraft fuels. Tanks are located underground. For aboveground storage use category code 41120. See category code 124-series for operational fuel storage.
41123	Jet Fuel Storage, Underground Tanks for the bulk storage of jet aircraft fuels. Tanks are located underground. For aboveground storage use category code 41121. See category code 124-series for operational fuel storage.

442 Storage, Covered, Installation and Organizational

Three basic types of facilities providing covered storage at the facility and organizational level include:

- (a) warehouse, storehouse, and garage types of storage completely enclosed by walls, together with heating, sprinkler, and alarm systems as needed;
- (b) shed storage not completely enclosed by walls, including alarms and other systems; and
- (c) covered storage for flammables, both warehouse and shed types, removed or set apart from other covered storage according to criteria for storage of flammables.

44210 Aircraft Production Parts Storage, Installation

A facility for storage of parts associated with the maintenance, repair, and production of military aircraft at AMC facilities. Facilities for aircraft parts storage at other aviation facilities should use category code 21113.

452 Storage, Open, Facilities and Organizational

Open storage areas at facilities and organizational levels. These storage areas are generally graded, drained and surfaced with concrete, asphalt, or other material, to stabilize the supporting ground.

45210 Open Storage Area, Installation

A facility for storage of material and equipment which does not require any protection from the elements. They are generally improved or semi-improved areas which do not provide any cover for the material stored inside. The Defense Reutilization and Marketing Office (DRMO) often uses such facilities for storage of surplus and salvage.